

## REMARKS

Claims 1-23 are pending in the present application, claims 24-35 having been canceled as being directed to an unelected invention. Claims 3, 5, 14-15, 19, and 23 were objected to, while claims 1-13, 16-18, and 20-22 were rejected. Applicant has canceled claims 14 and 20, and has amended claims 1, 3, 5, 9, 11, and 15-18. No new matter is introduced.

### **Claim Objections**

Claim 3 was objected to for the following informality: "epichorohydrin" in line 3. Claim 3 has been amended so that this reads "epichlorohydrin". Reconsideration and withdrawal of this objection are respectfully requested.

Claim 5 was objected to for the following informality: "acetohehnone" in line 2. Claim 5 has been amended so that this reads "acetophenone". Reconsideration and withdrawal of this objection are respectfully requested.

Claims 14-15, 19, and 23 were objected to for being dependent upon rejected base claims, but the Examiner indicated that these claims would be allowable if amended to incorporate the limitations of their base and intervening claims. Applicant thanks the Examiner for so indicating. Applicant has canceled claim 14 and has amended claim 11 to incorporate the subject matter of claim 14.

### **Section 112 Rejections**

Claim 9 was rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claim 9 was amended to depend from claim 4, so that the phrase "the alcohol" has an antecedent basis. Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 20 was rejected under 35 U.S.C. §112, second paragraph as being indefinite. Applicant has canceled claim 20, and urges that this rejection is now moot.

### **Section 101 Rejection**

Claim 20 was rejected under 35 U.S.C. §101 for being an improper process claim. Applicant has canceled claim 20, and urges that this rejection is now moot.

### **Section 102 Rejections**

Claims 1-2, 11, 18, and 20-21 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,295,974 (Erdmann).

Claims 1-3 and 8-10 were rejected under 35 U.S.C. §102(b) as being anticipated by Panda, Journal of Polymer Science, Vol. 13, 1757-1764 (1975).

Claims 1, 3, and 9-10 were rejected under 35 U.S.C. §102(b) as being anticipated by Zahir, Journal of Applied Polymer Science, Vol. 23, 1355-1372 (1979).

Claims 1, 3-7, 11, 18, and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Choi, *et al.*, European Polymer Journal, Vol. 37, 1951-1959 (2001) (Choi1).

Claims 1-2, 3-8, 11, 18, and 20-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Choi, *et al.*, Bulletin of the Korean Chemical Society, Vol. 22, 1207-1212 (2001) (Choi2).

Claims 1-5, 8-11, 18, and 20-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Choi, *et al.*, Polymer, Vol. 43, 703-710 (2002) (Choi3).

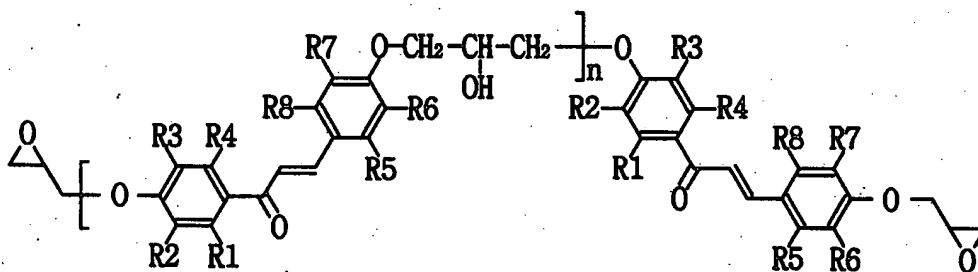
Claims 1, 3, and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by German Patent No. DE 2256961 (Koelbel, *et al.*), as evidenced by abstract AN 82:73919.

Applicant has amended claim 11 to incorporate the limitations of claim 14. The Examiner indicated that claim 14 would be allowable if amended to be placed in independent form. Applicant thus urges that amended claim 11 recites patentable subject matter. Reconsideration and withdrawal of this 102 rejection are respectfully requested.

Claims 18 and 21 depend from claim 11 and are thus patentable for at least the same reasons as claim 11. Reconsideration and withdrawal of these 103 rejections are respectfully requested

In order for a reference to anticipate under section 102, it must disclose, either explicitly, or under the principle of inherency, every claimed limitation of the claimed invention.

Applicant has amended claims 1 and 3 to recite that "at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the halogen and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the alkoxy group". Although each of the references cited by the Examiner discloses reacting bis(4-4'-hydroxy) chalcone with epichlorohydrin in the presence of an alkali metal salt to synthesize an epoxy resin, none of the cited references disclose an epoxy resin of the formula



in which at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the halogen and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the alkoxy group, as recited in claims 1 and 3. Therefore, Applicant urges that claims 1 and 3 are not anticipated by either Erdmann, Panda, Zahir, Choi1, Choi2, Choi3, or Koelbel. Reconsideration and withdrawal of these section 102 rejections are respectfully requested.

Claim 2 depends from claim 1, claims 4-10 depend from claim 3, and claims 18 and 21 depend from claim 11, and are thus patentable for at least the same reasons as claims 1, 3, and 11, respectively. Reconsideration and withdrawal of these section 102 rejections are respectfully requested.

### Section 103 Rejections

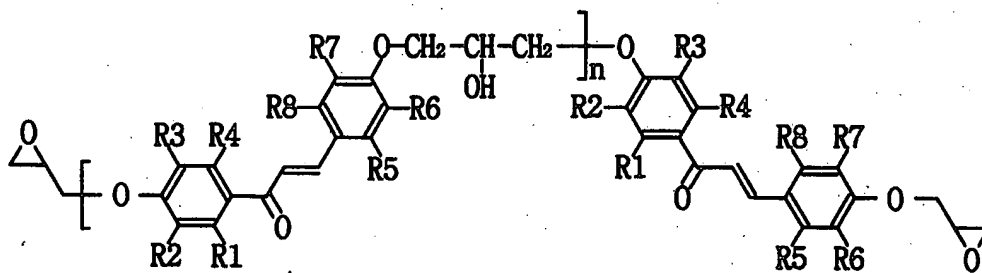
Claims 1-3, 8, 10-13, 16-18, and 20-22 were rejected under 35 U.S.C. §103(a) as being obvious over Erdmann.

Claims 2, 8, and 21 were rejected under 35 U.S.C. §103(a) as being obvious over Choi, *et al.*, Bull. Korean Chem. Soc.

Applicant has amended claim 11 to incorporate the limitations of claim 14. The Examiner indicated that claim 14 would be allowable if amended to be placed in independent form. Applicant thus urges that amended claim 11 recites patentable subject matter. Reconsideration and withdrawal of this 103 rejection are respectfully requested.

Claims 12-13, 16-18, and 21-22 depend from claim 11, and are thus patentable for at least the same reasons as claim 11. Reconsideration and withdrawal of these 103 rejections are respectfully requested.

Applicant has amended claims 1 and 3 to recite that "at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the halogen and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the alkoxy group". Although Erdmann teaches reacting an unsaturated aromatic ketone of the formula HO-A-B-A-OH with epichlorohydrin in the presence of an alkali metal salt to synthesize an epoxy resin, Erdmann does not teach or suggest an epoxy resin of the formula



in which at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the halogen and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> is the alkoxy group, as recited in claims 1 and 3. In particular, none of the formulae of 29 suitable unsaturated aromatic ketone listed in the

table disclose bis(4-4'-hydroxy) chalcone with side groups R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, and R<sub>8</sub> in which at least one of said side groups the halogen and at least one of said side groups is the alkoxy group. Since Erdmann does not teach or suggest all the claim limitations of claims 1 and 3, Applicant urges that a *prima facie* case of obviousness of claims 1 and 3 cannot be maintained. Reconsideration and withdrawal of these 103 rejections are respectfully requested.

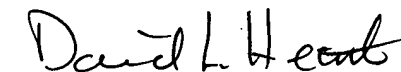
Claim 2 depends from claim 1, and claims 8 and 10 depend from claim 3. Claims 2, 8 and 8 are thus patentable for at least the same reasons as claims 1 and 3, respectively. Reconsideration and withdrawal of these 103 rejections are respectfully requested.

### **CONCLUSION**

Applicant urges that claims 1-13, 15-19, and 21-23 are in condition for allowance for at least the reasons stated. Early and favorable action on this case is respectfully requested.

Respectfully submitted,

By:



David L. Heath

Reg. No. 46,763

Attorney for Applicants

**Mailing Address:**

**F. Chau & Associates, LLC**  
**130 Woodbury Road**  
**Woodbury NY 11797**  
**(516) 692-8888**  
**(516) 692-8889 (FAX)**